BARRAGE

The RCA Museum News

THE RCA MUSEUM
CANADA'S NATIONAL ARTILLERY MUSEUM

LE MUSÉE NATIONAL DE L'ARTILLERIE DU CANADA
LE MUSÉE DE L'ARC

April 2026

Hidden Hazards: Asbestos in Military Vehicles

The photograph captures two contractors starting asbestos removal on the Honest John Loader, highlighting the balance between safety and preserving history.

In January and February 2026, the Royal Canadian Artillery Museum completed an asbestos abatement project on 31 vehicles and one aircraft. Museum staff are responsible for preserving the collection safely while addressing hazards transparently.

Most affected artifacts were Second World War–era Canadian Military Pattern (CMP) vehicles, mainly Ford -built. During wartime production, manufacturers used asbestos for engine-compartment insulation, fastening sectional pads with metal staples to firewalls and engine surfaces. Some vehicles had partial removal in the 1990s, but inspections revealed residue and intact sections.

After confirming the presence of asbestos, the museum hired a certified contractor. The two-week abatement process involved staff escorting contractors, clearing work areas, and maintaining security. Artifacts were distributed across the M101 archives building, the main museum, secondary storage, and the gun park. The Honest John Rocket and loader were addressed last. Because asbestos was present in the rocket's support pads, a recovery vehicle lifted the rocket approximately one foot off the loader to allow safe access.

This project highlights a key lesson for military museums: many WWII-era vehicles contain hidden asbestos. Disturbing it—especially during mechanical work—poses serious risk. Through careful planning and professional oversight, the Royal Canadian Artillery Museum protected staff, contractors, and visitors while removing these silent hazards from history.

Thank You Dale Murray – and a Note on Military Decoration Displays

We're often asked, "Why aren't my father's medals on display? We donated them years ago." It's a fair question. The simple truth is that we can't display every medal set we receive. Our collection is extensive, and space is limited. In 2023, Senior Curator Jonathan Ferguson redesigned the Gunner Gallery. What was once a quiet space showcasing a single Victoria Cross has become a vibrant room featuring 81 medal sets from Canadian Gunners. Each set is displayed with a short biography alongside that original Victoria Cross. Visitors now pause, read, and reflect—connecting more deeply with the personal stories behind Canada's artillery history.

This transformation would not have been possible without the generosity of our donors over the past sixty years. Among them, Dale Murray of Victoria, British Columbia, made an extraordinary contribution. Over 25 years, he donated thirty sets of military decorations belonging to Canadian soldiers, including several key figures in the RCA:

- Lieutenant-General Sir Henry Burstall, Commander of the 2nd Canadian Division, WWI.
- Brigadier W. O. H. Dodds, Commander of the 5th Canadian Divisional Artillery in WWI and the RCA's third Colonel Commandant (1928–1934).
- Lieutenant-Colonel C. E. Montizambert, the second Commanding Officer of B Battery in Kingston, a distinguished Canadian gunner.

In past newsletters, we've shared stories about these three, along with two other medal sets that Dale donated:

- Colonel F. M. Benson of A Battery, an officer during the 1910s–40s, awarded a DSO for bravery.
- Pilot Officer William (Bill) Fortt, RCAF, who died in 1942 during a Spitfire training flight at age 21.

Before the gallery update, we displayed only one of Dale's medal sets. Today, the Gunner Gallery features eleven more. Each includes the mounted decorations, a photograph, and a short biography, allowing visitors to connect with the people behind the medals.

Even with these additions, we can only display a fraction of our collection. The museum holds over 60,000 artifacts, and at any given time, only about 2% are on display. Permanent galleries provide a consistent visitor experience, refreshed roughly every ten years. Temporary exhibits, rotating annually, allow us to share new stories and shine a light on different parts of our collection.

To all our donors: thank you for your trust, generosity, and patience. And to Dale Murray, who passed away in December 2025—thank you for your remarkable support, thoughtful contributions, and enduring dedication to preserving Canada's artillery history.

By Andrew Oakden

Charles E. Montizambert and B Battery in the North-West Rebellion

Lieutenant-Colonel Charles E. Montizambert's medals, displayed at the RCA Museum, reflect a career shaped by field service and the early development of Canada's artillery. Among them, the North-West Canada Medal marks his service in the 1885 rebellion — one of the Dominion's first coordinated military campaigns.

Montizambert was born in Quebec in 1841 into a family steeped in public service. Educated at Upper Canada College, he joined the Quebec Volunteer Garrison Artillery and rose to Captain by Confederation. He served in the Fenian Raids, earning the Canada General Service Medal with two clasps.

A drawing of Lt-Col Montizambert dated 1885.

When British garrisons left Canada in 1871, the Dominion formed its first permanent artillery units. Montizambert became a leading officer of B Battery in Quebec City, overseeing training, discipline, and field exercises that often tested Gunners to the limit in Canadian winters. Lt-Col Thomas Bland Strange, the school's commandant, praised his competence and energy, entrusting him with the battery's daily management.

In 1882 Montizambert took command of B Battery and introduced a challenge cup for the best gunner, judged on artillery skill, marksmanship, and conduct. This focus on technical ability and discipline proved vital in 1885, when the North-West Rebellion erupted under Louis Riel and allied Indigenous leaders.

In March 1885, Montizambert led over a hundred men and their guns westward. With the Canadian Pacific Railway incomplete, the journey involved long marches over harsh terrain and bitter cold. Despite frostbite and improvised billets, the battery arrived ready for field service. Montizambert's Gunners provided crucial artillery support to largely infantry militia columns across Saskatchewan, bringing discipline and firepower that were otherwise scarce.

LCol Montizambert's two military decorations on display at the RCA Museum.

At the Battle of Cut Knife Hill on 2 May 1885, B Battery detachments supported Lt-Col William Dillon Otter's column in attacking Poundmaker's camp. The rugged terrain limited artillery use, yet the gunners fought with determination. Several were wounded, and officers were commended for gallantry.

For his role, Montizambert received the North-West Canada Medal with the Saskatchewan clasp. About 5,650 medals were awarded in total, including roughly 1,750 with the Saskatchewan clasp for service at Fish Creek, Batoche, Cut Knife, and Frenchman's Butte. Around 920 went to the North-West Mounted Police, with the remainder issued to other members of the expeditionary force. A few medals also bear the unofficial "Batoche" bar.

B Battery remained on active service for more than fifteen months, conducting patrols and helping restore order before returning to Quebec in July 1886. Parliament later praised the battery's "gallantry, discipline and good conduct."

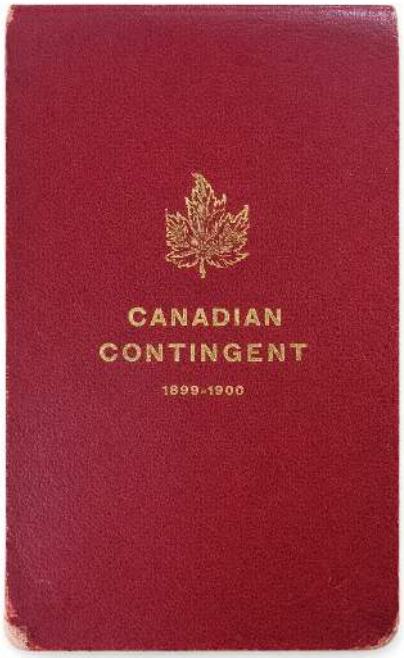
As Inspector of Artillery and commander of B Battery, Lt-Col Montizambert helped standardize training and promote technical study within Canada's artillery. His service in the North-West Rebellion—and the award of the North-West Canada Medal—anchors his career within the early military history of Canada.

By Andrew Oakden

Captain Arthur Panet's Boer War Diary

In the fall of 1899, Canadian artillerymen sailed for South Africa aboard the S.S. Sardinian, cheered by large crowds and confident speeches. Captain Arthur George Panet, an artillery officer who recorded events in his now-faded notebook, described the departure as "one of the grandest demonstrations ever given in Canada." Once the ship cleared the wharf, he admitted that emotion overcame him and withdrew to collect himself (p. 3).

The Atlantic crossing quickly erased any romance. Panet spent "nearly 3 days of sickness," regretting his enthusiasm (p. 5). Life aboard ship mixed training with diversion. The Canadians landed at Cape Town on 30 November 1899. Sent ahead to prepare camp, he found that arrival in Africa did little to improve discipline. "The men made fools of themselves that night and the next day," he noted (p. 8). The advance north followed soon after. Heat, dust, and long marches defined the movement inland. "Ten days and ten nights…very warm," he summarized (p. 10).

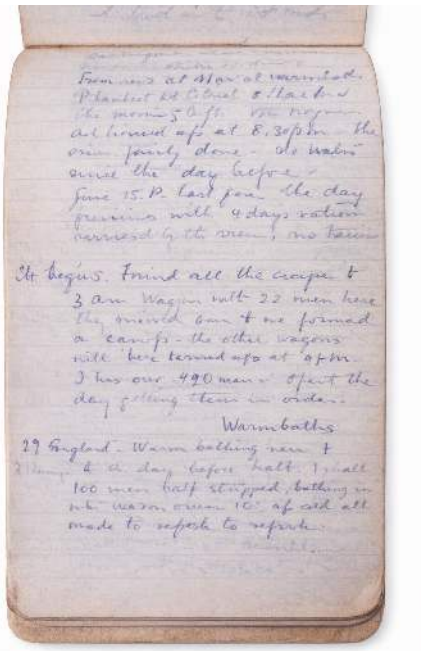


The cost of the campaign became clear at the Orange River. Panet visited the grave of Lieutenant C. C. Wood, the first Canadian killed in the war. It was marked with "a rough wood cross made of ties," placed by comrades who understood how quickly fortune could turn (p. 12). He did not dwell on the scene, but the gravity of the loss is evident in his brief account.

By May 1900, entries focused on artillery work as British forces advanced into the Transvaal. Guns were brought forward and deployed with care. "We have our 4 guns and wagons…all the guns in line," he recorded (p. 45). Canadian gunners operated alongside British and colonial units, often with uneven coordination. Panet noted a failure in communication with General Hamilton and observed that, without clear direction, key ground could not be held (p. 62).

Pretoria itself impressed and disappointed him. He found the town "very small," though he noted the Palace of Justice, now used as a hospital, and Lord Roberts' chosen residence (p. 64). Supplies were scarce. "We could buy no provisions in Pretoria," he wrote, concluding that the town had been stripped by the war (p. 65).

In September 1900, Panet described coming into action against Boer positions. Initial shots fell wide, followed by sustained fire as guns engaged targets concealed by bush (p. 85). Boer artillery replied in strength, and he estimated calibres and the number of rounds fired (p. 86). Casualties followed. One man lost a leg and later died; several others were wounded (p. 87). These facts were recorded without embellishment.



The diary also highlights the grind of the campaign: river crossings, worn-out horses, constant movement, dust, rain, and early starts. Occasional gains included the capture of prisoners and large numbers of cattle (p. 112). At Warmbaths, the Canadians withdrew before Boer guns could engage them, leaving the enemy with loaded artillery and no targets (p. 117).

Panet's handwritten diary is preserved today at the Royal Canadian Artillery Museum. It is not a finished history, but a working record written between marches and actions. Its value lies in capturing Canadian artillerymen confronting modern warfare as it unfolded, adapting through constant movement, labour, and repeated adjustment. The Boer War emerges not as a sequence of campaigns or victories, but as the day-to-day work of soldiers recorded in real time.

By Andrew Oakden

Fresh Signage at the RCA Museum

This past fall and winter, the RCA Museum refreshed all thirty-three permanent gun and vehicle displays. Each sign now features a clean, consistent design, with updated text and images that help visitors better understand and enjoy every artifact.

Above is a collage highlighting five of the updated signs.

Museum signs, like any exhibit, don't last forever. Some of our old signs were up to fifteen years old—faded, missing details, or even damaged. Others had outdated information or images that didn't fully reflect the artifacts. The new signage addresses all these issues, providing clear, accurate, and engaging details about each gun and vehicle.

Consistency and historical accuracy have been our priorities. Uniform signage makes it easier for visitors to explore the museum and gives the space a polished, professional feel. While guns and vehicles were the focus of this update, other areas are next. The Great Gunner panels, for example, currently have long, dense text that we'll soon condense for an easier read. Longer-term, the main text panels will be refreshed as well.

We hope these new signs help visitors dive deeper into the stories behind each artifact—from technical specifications to historical significance. Thanks to professional printing, this upgrade was done affordably, showing that even small investments can make a big difference.

With refreshed signage throughout the museum, the RCA Museum continues its mission: preserving the history of the Canadian gunner while offering an engaging, informative, and visually appealing experience for all visitors.

Canadian Artillery at D-Day: The M7 Priest

Visitors often ask whether the M7 Priest self-propelled 105 mm howitzer in our gallery landed on D-Day. While we cannot confirm that this vehicle came ashore at Juno Beach, it is the same type as the ninety-six Priests Canadian gunners landed on 6 June 1944—artillery that supported the assault from the opening hours.

Our vehicle was built late in the war, likely in late 1943 or early 1944. It is not an early production model. The first M7s used the chassis of the M3 Lee; ours uses the M4 Sherman chassis, confirming it as the later M7B1 variant. In 1943, as the M3 became obsolete, U.S. production shifted to the Sherman chassis, improving reliability and simplifying maintenance through standardised parts across the Sherman family.

Canadian forces employed the Priest in modest but significant numbers. The 8th Field Regiment, Royal Canadian Artillery, first deployed it in Italy in November 1943 with the 5th Canadian Armoured Division. Its largest use came on D-Day, when the 12th, 13th, 14th, and 19th Field Regiments landed ninety-six Priests in support of the 7th and 8th Canadian Infantry Brigades. Some fired from landing craft before reaching French soil, delivering bombardment as the assault advanced inland.

Designed for mechanized warfare, the M7 Priest emphasized mobility, coordinated arms, and concentrated firepower. Armed with the U.S. 105 mm M2A1 howitzer and fielded in both M7 and M7B1 variants, it enabled gunners to move with tanks and infantry while delivering sustained, protected fire support. By late summer 1944, many were converted into armoured personnel carriers known as “Kangaroos,” reflecting the continued adaptation required in mobile operations.

After the war, the U.S. Army upgraded 127 M7B1s to the M7B2 standard for service in Korea, modifying the gun mount to allow 65 degrees of elevation instead of 35. High-angle fire proved essential in mountainous terrain. Testing confirms that our vehicle elevates to 65 degrees, identifying it as an M7B2.

In the late 1980s, soldiers from 1st Regiment, Royal Canadian Horse Artillery (1 RCHA), recovered two M7B2 Priests from a German artillery range, where they had been used as targets—a common postwar method of disposal. The United States had transferred surplus M7B2 Priests to NATO allies, including West Germany, which operated them from 1956 into the early 1960s before replacing them with newer self-propelled guns. After withdrawal, some were sent to training ranges as targets. A restoration team led by Master Warrant Officer R. L. J. Oliver stabilized the vehicles and carried out structural repairs where possible. One restored Priest returned to Canada in 1993 and has been displayed at the RCA Museum since 2003.

Canada did not retain its Priests after the war. Supplied under Lend-Lease, most were returned, scrapped, or transferred to other European countries, leaving only a handful in Canada. Today, two Canadian museums are known to hold surviving Priests: the Ontario Regiment RCAC Museum displays an M7B1, while our museum preserves an M7B2. Though a postwar modification, this vehicle represents the artillery systems that supported Canadian soldiers from Italy to Normandy—its survival a testament to the adaptability demanded of Canadian gunners in the fast-paced mechanized warfare of the Second World War.

By Andrew Oakden

Directing the Guns: Canadian Observation Posts in WWII

When visitors enter the RCA Museum's current temporary exhibit, they encounter a Second World War Artillery Observation Post (OP). Three mannequins in wartime battledress occupy their stations: a Forward Observation Officer (FOO), a radio operator, and a gunner. Together they represent the small teams who served as the eyes of Canadian Artillery on the battlefield.

During installation, our Collection Manager, William Brandon, selected the artifacts and arranged the display. Drawing from the museum's collection, he dressed the mannequins, positioned the equipment, and recreated the layout of a working observation post.

Observation Posts were essential to the effectiveness of Canadian artillery during the Second World War. OP teams positioned themselves close to the fighting—often inside damaged buildings, church towers, hilltops, or hastily dug positions. From these vantage points they observed enemy movement and directed artillery fire onto targets beyond the reach of infantry and armoured units. While the guns sat kilometres behind the front line, observers maintained visual contact with the battlefield and relayed the information needed to direct the fire.

The officer in the display represents the Forward Observation Officer, who commanded the OP and controlled artillery fire. FOOs carried significant responsibility. They observed enemy activity, selected targets, and coordinated fire missions, often while exposed to enemy fire. Their effectiveness depended on maintaining constant communication with the gun batteries supporting them.

Next to the officer crouches the radio operator using a Wireless Set No. 19, the standard Allied radio introduced in 1940. It formed the vital link between the observation post and the artillery batteries. The set operated on three channels: the long-range A set for communication with artillery units, the short-range B set for local contact, and an internal intercom for the crew. Through this system, the team transmitted target information and fire corrections as the guns engaged. If rounds landed short, long, or wide, the FOO issued adjustments and the batteries shifted their aim.

Several key tools complete the display and illustrate how observers worked. Binoculars allowed the team to scan the battlefield and track where artillery shells landed. An M9A1 optical rangefinder helped estimate the distance to enemy positions. A mounted periscope enabled observers to watch the battlefield while remaining behind cover, reducing the risk of detection. At the centre of the OP sat a map board where the team plotted targets, reference points, and fire missions using operational maps.

These tools allowed Canadian artillery to respond with speed and precision. Canadian doctrine placed artillery under centralized control, allowing commanders to concentrate fire from multiple batteries or entire regiments onto a single target. Observation Posts made this system work. The FOO located the target, adjusted the fire, and confirmed the strike. Within minutes, dozens of guns could focus on one position.

Canadian OP teams served wherever Canadian forces fought, including Sicily, Italy, Normandy, and the Netherlands. Working close to the front, they directed the firepower of guns positioned far behind them.

This display forms part of the WW2 Command Posts temporary exhibit at the museum. When the exhibit concludes, the Observation Post will likely move into the permanent Second World War gallery. There it will continue to show how small teams at the front shaped the battle—directing the fire of entire regiments with a radio, a map, and a clear view of the enemy.

By Andrew Oakden

The Beloved Ma' Deuce: Canada and the .50-Calibre Machine Gun

Just after midnight on 25 April 1951, machine gunners from the 2nd Battalion, Princess Patricia's Canadian Light Infantry, gripped their .50-calibre Browning machine guns and waited on a cold Korean hillside. Mounted on M3 half-track vehicles, they waited in the dark as roughly 500 soldiers of the Chinese People's Volunteer Army advanced along the reverse slope toward the battalion headquarters.

When Chinese troops broke from the tree line only 60 metres away, the Canadian soldiers unleashed their .50s. The heavy machine guns raked the assaulting force with close-range enfilade fire and helped halt the attack during the Battle of Kapyong. The weapon proved decisive in saving Canadian soldiers' lives, even as the battalion suffered 10 killed and 23 wounded. The Communists would ultimately suffer an estimated 2,000–6,000 killed in this operation of their spring offensive.

Canadian soldiers in Korea

John Browning designed the .50-calibre machine gun near the end of the First World War in response to the new threat of armoured tanks and vehicles on the battlefield. Although the design arrived too late for that conflict, it matured into the M2 Browning, which fires a half inch, 660-grain projectile at nearly 3,000 feet per second. Its reliability and penetration made it an essential component across Allied Forces during the Second World War.

Canadian Forces during WWII adopted the .50-calibre for multiple roles. The Canadian Army mounted it on vehicles such as the M4 Sherman and M7 Priest. The Royal Canadian Navy outfitted ships with .50s beginning in 1941 to strengthen anti-aircraft defence. The Royal Canadian Air Force fielded the weapon as well, including six on Curtiss P-40 Kittyhawk fighters flown by No. 111 Squadron RCAF and No. 118 Squadron RCAF.

Canadian soldier with .50cal mounted on M113

When Canada entered the Korean War in 1950, the M2 followed Canadian troops once again. Crews primarily mounted the guns on vehicles, while some teams deployed them on tripods for ground support. The weapon's closed-bolt operation and single-shot capability encouraged early experiments with long-range precision fire and demonstrated the accuracy of the .50 BMG cartridge.

Decades later, Canadian snipers confirmed the cartridge's long-range precision in Afghanistan with record-setting shots from bolt-action rifles chambered in .50 BMG. Meanwhile, Canadian soldiers continued to employ the M2 widely. They mounted it on Leopard tanks, T-LAVs, Griffon and Chinook helicopters, and set it on tripods to defend positions. The gun delivered reach, power, and reliability that potential replacements could not match.

The Royal Canadian Artillery Museum's collection includes a Browning M2 .50-calibre machine gun that began life as a Browning M3 aircraft machine gun. Weapons technicians at CFB Shilo later converted it into a ground-mount M2 configuration, enabling it to be mounted on vehicles or a standard ground tripod.

More than a century after John Browning first conceived the design, the Browning M2 heavy machine gun remains a central element of Canadian firepower. Canadian soldiers defend hilltops, protect convoys, and secure bases with the heavy machine gun they often refer to by its enduring nickname, "Ma Deuce." Its longevity lies in its reliability and effectiveness—qualities that continue to protect generations of Canadian soldiers.

Canadian soldier in Afghanistan cleans his .50cal

By Will Brandon

Model 1936 105 mm Schneider — Shipped in Dangerous Condition

On 12 June 1956, Colonel H. E. Brown, Colonel Commandant of the Royal Canadian School of Artillery at Camp Shilo, wrote to Army Headquarters in Ottawa to confirm receipt of a French 105 mm gun shipped by Canadian National Railways from Camp Borden. It should have been routine. It was not.

During inspection and preparation for museum display, staff discovered that the Model 1936 105 mm Schneider was still loaded. The breech contained a live high-explosive round marked Tritolo 1937, fitted with a German time-and-percussion fuze.

Model 1936 105 mm Schneider in the RCA Museum gun park, February 2026.

Colonel Brown reported, with restraint, that the gun had been shipped "in dangerous condition" and recommended measures to prevent a recurrence. The round was removed and destroyed; the fuze was forwarded to Headquarters, Royal Canadian Artillery, as a training aid for identifying foreign ordnance. No one was hurt, and the museum acquired a story that continues to surprise visitors. Presumably, the CNR freight manifest did not include a checkbox for "artillery, loaded."

Visitors often ask why the museum holds so many non-Canadian artillery pieces, particularly German ones. The reason is straightforward. The RCA Museum specialises in artillery, yet too few Canadian gun models survive to fill the gun park and galleries. Foreign guns — especially those from the two world wars — were produced in far greater numbers and were more readily available as trophies or surplus. After both conflicts, many came to Canada in this way, and dozens entered the museum's collection. They represent the weapons Canadian gunners trained against, studied, and at times captured and reused.

The Model 1936 105 mm Schneider belongs to this category. Designed by Schneider et Cie in the mid-1930s, it formed part of France's effort to modernise its medium artillery after the First World War. The gun weighed roughly 8,600 pounds (3,900 kg) in action, fired a projectile of about 35 pounds (16 kg), and had an effective range of approximately 17,500 yards (16,000 metres). It used a split-trail carriage, modern recoil mechanism, and pneumatic tires for motorised towing, although it could still be horse-drawn. In this respect, it reflected the transitional character of European armies on the eve of the Second World War. By 1940, France had fielded roughly 160 of these guns.

After the German invasion of France in May 1940 and the subsequent occupation, many were captured intact. The Wehrmacht re-designated and reused them, primarily in static and defensive roles, including coastal defence against an expected Allied landing. Thus a French gun in Canada could contain a German fuze and an Italian-marked explosive charge.

The gun likely came to Canada after the war as a trophy, first to Camp Borden and later to Camp Shilo. No one checked the chamber; why remains unknown. The oversight went unnoticed until Colonel Brown's 1956 letter brought it to light.

Since the 1950s, the RCA Museum has displayed the Model 1936 105 mm Schneider in its gun park, unloaded and far less dramatic than its arrival. Today, it stands quietly among the other pieces — a static exhibit that once arrived by rail with a live round still in the breech.

By Andrew Oakden

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